
Absent: Jon Sanborn

I. **Call To Order:** The meeting was called to order at 12:00 on February 1, 2012 in Room 2502. Dr. Will Lynch presided.

II. **New Business**

A. The Minutes from December 6, 2011 were approved as presented.

B. 1. Faculty Senate – First, we were informed by Dr. Lynch of the election results: Dr. Feske was elected to a 3 year Senate term and Dr. MacGowan was elected to a 1 year alternate term. The department will have a run-off for the remaining 2 alternate seats between Drs. Quillian, Secrest and Wallace.

Dr. Padgett shared the following:

2. Resolution from Senate charge on eFace. The Senate discussed the adoption of a campus-wide campaign to promote student participation prior to and during the eFace evaluation period by using pop-ups through SHIP/Pirate’s Cove, flyers posted around campus, advertising evaluation period on website homepage and other activities that would attract student participation.

3. Bill on Summer Teaching Assignments – This bill passed through the Senate and it is currently at the President’s desk waiting for an answer within the next 30 days. The bill indicates that Summer courses must be offered first to full-time faculty prior to offering them to part-time temporary faculty.

4. Resolution on Faculty Activity/Planning Period – The Faculty Senate is asking the administration to reinstate the faculty activity/planning period on Mondays, Wednesdays and Fridays from 12-1 pm and that no classes be taught during this period.

5. Charge to Planning, Budget and Facilities Committees on financial issues discussed on Fall 2011. This item is still being discussed and the Senate is waiting for a final report to be given.
6. Update on Faculty Handbook – Dr. Kraft is currently making corrections to the document. The Faculty Senate is asking the administration for a clear definition of the different designations on the handbook.

C. Committee Reports
   i. Chemistry Curriculum Committee. The committee met to consider the following:
      1. The decoupling of CHEM 3401 & CHEM 3402, which would not make 3401 a pre-req for 3402.
      2. Modification of the course description to more accurately reflect course content.
      3. Changing the pre- or corequisite requirements for both courses.

   The faculty voted unanimously in favor of approving the above proposal. Please refer to attachment #1 for more details.

   ii. Physics Planning Committee – Please, refer to attachment #2 for information.

   iii. Physics Curriculum Committee – Mr. Jaynes proceeded to inform us of 3 action items, 2 of which would affect the catalog.

      Item #1. A motion to change the credit awarded for an IB course in physics on page 24 in the Undergraduate Catalog from PHYS 2211K to PHYS 1111K. This was approved as follows: IB course in physics with a grade of 5, 6 or 7: PHYS 2211K PHYS 1111K

      The faculty voted unanimously in favor of approving the above proposal.

      Item #2. A motion was approved to change the prerequisite for PHYS 3120 DIGITAL ELECTRONICS as follows:

      PHYS 3120 DIGITAL ELECTRONICS 1-6-3
      Prerequisite: MATH 1113 and 8 semester hours of lab science. Either PHYS 1112K with a minimum grade of C and MATH 1161 with a minimum grade of C or PHYS 2212K with a minimum grade of C.

      The faculty voted unanimously in favor of approving the above proposal.

      Item #3. A motion was approved to request the creation of lab fees of $40 per student for PHYS 3801K, PHYS 3120 with lab, PHYS 3700K and PHYS 4120 with a lab.

      The faculty voted unanimously in favor of the above request. Please, refer to attachment #3 for more information.

   iv. Safety Committee – the committee presented a safety practices document for the department’s approval. After careful consideration, the faculty voted as follows: 8 abstentions, 6 in favor, 5 against (motion carries).
For more details, please refer to attachment #4.

The department is planning to bring a safety consultant in the month of May 2012 in order to establish what safety practices to conduct rather than going by someone else’s opinion about safety.

D. Fall 2012 Courses – PHYS needs to set their priorities for 3000 & 4000 level courses to be offered. CHEM, we are still looking for CHEM 3000 & 4000 level courses for Fall 2012. We are planning on dropping back to 1 ISCI 2002/2002L course this fall because of decreasing demand. Regarding CHEM 1151 and 1152, we will only be offering our normal 1151 set for the Fall 2012.

E. Summer 2012 – Dr. Lynch asked for a final “request” list so he can build the summer schedule within the next few weeks. Basically, this will be for the two 5 week sessions during the months of June and July 2012. Currently we only have staff support for four labs, typically General Chemistry labs and CHEM 1151. We are in need of staff support for 2000 level courses. The department will be prioritizing according to seniority and rank.

F. President Bleicken’s visit – Dr. Lynch asked for agenda items for the President’s visit on February 22/2012 and he, also, offered to be the spokesman for the department.

III. Old Business
A. Lab Fees – A motion to apply lab fees on the chemistry side to all research courses and all lab courses that do not currently have a fee was presented. The faculty voted unanimously to approve the motion. Please, refer to attachment #5 for more information.

B. CST Dear Search Update – The search is underway and within a couple of weeks candidates should be coming to campus for interviews.

C. Tenure Track Analytical Search – Dr. Padgett will be e-mailing the agenda for the 4 candidates who will be on campus during the month of February for interviews.

IV. Announcements
A. Student/Faculty News

4. Aristide Sanou, Accepted to PhD program in Aerospace Engineering at Purdue University
8. Cassandra Connolly, Accepted to PhD program at Emory University
9. Phung Nguyen, accepted to PhD program at NC State.

Adjournment
The meeting was adjourned at 1:00pm.

cc: Dr. Anne Thompson, Interim Vice-President of Academic Affairs – Dean of Faculty
   Dr. Robert Gregerson, Interim Dean, College of Science and Technology
   Dr. Delana Nivens, Interim Assistant Dean, College of Science and Technology

ATTACHMENT #1
CHEMISTRY CURRICULUM COMMITTEE MINUTES  
JAN. 25, 2012  
PRESENT: LYNCH (CHAIR), BRUSH, CARPENTER, QUILLIAN, PADGETT  

The committee met to consider the following proposal related to CHEM 3401 & 3402. The major components are as follows:

a. “Decoupling” CHEM 3401 & 3402, not making 3401 pre-req for 3402.  
b. Modification of the course description to more accurately reflect course content.  
c. Changing the pre- or corequisite requirements for both courses

The committee voted 4-0-0 to accept the change.

**************************************************  
CHEM 3401 PHYSICAL CHEMISTRY I THERMODYNAMICS AND KINETICS 3-4-4  
Prerequisite: CHEM 2300 (minimum grade of C) and MATH 1161 (minimum grade of C)  
Prerequisite or Corequisite: PHYS 1112K or PHYS 2212K  

CHEM 3402 PHYSICAL CHEMISTRY II QUANTUM MECHANICS AND SPECTROSCOPY 3-4-4  
Prerequisite: CHEM 3401 (minimum grade of C) CHEM 2300 (minimum grade of C)  
Prerequisite or Corequisite: PHYS 1112K or PHYS 2212K and MATH 2072  
Continuation of CHEM 3401. Kinetic-molecular theory, transport processes, Quantum mechanics, theories of atomic/molecular structure, spectroscopy, photochemistry, group theory applied to spectroscopy. Analytical applications of physical chemistry emphasized through lab investigations.

B.S. chemistry major change: 4 hours will be taken from C in the current program, “free electives” changing that requirement from 7 to 3 hours.

Rationale: The courses are being split as their content is not dependent on each other. This will allow students to take them in either order. Assessment indicates having a strong math background is required for doing well in either of the courses, therefore a C or better requirement has been added for MATH 1161. MATH 2072 has been added to CHEM 3402 due to the discrepancy between the math requirements for the course and the math used in the course. This course is required for the BS and not the BA, this raises the Math requirement for the BS to MATH 2072, which brings Armstrong in line with many of our peers. In addition, 9 regional graduate schools (CU, USC, UGA, GT, UNC, NCSU, UF, USF, and AU) where contacted and asked what their math requirement is, two said calculus II was a minimum, all said they like to see at least calculus II (even if there was no official requirement).
PROGRAM FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

A. General Requirements

Core Areas A, B, C, D, and E ................................................................. 42 hours
Chemistry majors are required to take MATH 1113 in Core Area A and MATH 1161 in Core Area D
Area F ........................................................................................................ 18 hours
CHEM 1211 and 1212 (and labs) - Principles of Chemistry I, II (unless taken to satisfy Area D, in
which case replace with 8 hours of lower division electives)
Choose one sequence from:
   PHYS 1111K - Introductory Physics I and
   PHYS 1112K - Introductory Physics II or
   PHYS 2211K - Principles of Physics I and
   PHYS 2212K - Principles of Physics II
One hour excess for MATH 1161 from Core Area D
One hour lower division approved elective
Physical Education ..................................................................................3 hours

B. Major Field Courses .............................................................................. 39 hours
CHEM 2101/2101L - Organic Chemistry I
CHEM 2102/2102L - Organic Chemistry II
CHEM 2300 - Principles of Chemical Analysis
CHEM 3200 - Inorganic Chemistry
CHEM 3300 - Instrumental Analysis
CHEM 3401 - Physical Chemistry I
CHEM 3402 - Physical Chemistry II
CHEM 4500 - Chemistry Seminar
9 hours from:
   CHEM 3801, 3802, 3803, 4100, 4200, 4300, 4400, 4600, 4940, 4950, with a maximum 2 hours total
   from: CHEM 3900, 4960, 4991

Add the following related field course

C. Related Field Course .............................................................................. 4 hours
Math 2083 – Calculus II

C. Electives ..................................................................................................21 hours
11 hours of upper-division courses
7 hours of free electives

D. Electives ..................................................................................................17 hours
14 hours of upper-division courses
3 hours of free electives

Total Semester Hours ................................................................. 123 hours

D. Regents’ Test and Exit Exam
Attachment #2

PHYSICS – January 2012
Instrument / Technology Plan

YEAR 2011-2012

GOAL: The Department will acquire and maintain technology and instrumentation that will meet the needs of the 21st century scientific community.

• Develop a capital campaign to meet the financial needs of the department in the areas of technology and instrumentation.
• Actively seek opportunities for external funding for new equipment and programs.
• Develop a plan of action for the periodic replacement of outdated/non-functional equipment and technology resources

Top Priority Instrumentation/Technology Required to Fulfill Educational Mission

1.) Assure that general supplies are adequate for chemistry and physics courses.
   a. Lab View Site License Annual Renewal – ($425 needed every year) (A license for $1999 for 1st year for 10 seats with annual renewal of $399 per year has now been secured. Renewal required in Fall 2012.)
   b. Yearly supplies – replacement of broken items, consumables, microcontrollers – estimated to be $3,000.

2.) Major Equipment Needs - Physics

   A. Higher priority
   a. Spectrum Tubes – Sargent-Welch – Hydrogen
      (WLS68755-30G, 6 @ $35.50 each), Helium (WLS68755-30F, 3 @ $35.50 each), Mercury Vapor (WLS68755-30K, 3 @ $49.35) Total $467.55
   b. Dual Digital Micrometer – TRESNA 212-102 (6 @ $142.25) – used for precise positioning of interferometer parts
   c. High-Intensity Mercury Lamp/Power Supply & h/e Apparatus – (1 of each Pasco SF-9282 and SF-9288 – total $918) (Needed for measurement of h/e in photoelectric effect)
   d. Fiber Optics Speed of Light Apparatus – (5 needed @ $149 ea. from Electronix Express = $745) (Needed
e. **Multichannel Analyzer** – (3 needed @ $4200ea. = $12,600) (Needed to replace antiquated RS232 ported units to USB ported systems for PHYS 3801 & PHYS 3802 and undergrad. Physics research)

f. **Electron Spin Resonance Apparatus** – Cenco WLS1764-04 (1 @ $2,749.99) cheapest way to investigate spin

g. **Orion Parsec 8300C Color Astronomical Imaging Camera** - $1800 @ Error! Hyperlink reference not valid. – enable the instructional use of large telescope recently given to the department

h. **Capacitors** – Cenco WLS1955C Simple form Capacitors (16 @ $22.50) for 2212 lab

i. **Millikan Oil Drop Apparatus** – (Cenco WL0618L 1 @ $349.99) – demonstrates quantization of charge.

j. **Alpha Ray Spectrometer Detector** – (1 needed @ $1000) (Need to either replace detector or repair alpha ray spectrometer)

k. **Rutherford Scattering Apparatus** – 1 @ $588.99 – used to demonstrate nuclear size

l. **Hall Effect Apparatus** – Cenco WLS1800-24 – (1 @ $800) – used to determine sign of charge carriers in current

m. **Complete Mossbauer Effect** – Room temperature demonstration of Mossbauer effect for modern physics

n. **Sandbox Holography Kit** – Industrial Fiber Optics – 45-633A (6 @ $190) – Basic wave optics materials

o. **Michelson Interferometry Kit** - Industrial Fiber Optics – 45-942 (6 @ $100 each) – Basic wave optics materials

B. Lower Priority

a. **Franck-Hertz Experiment – Hg** Cenco CP32047-00 Complete (1 @ $3,156.49) – illustrates quantization of electronic energy levels

b. **Franck-Hertz Experiment – Ne** Cenco CP32048-00 Complete (1 @ $2,348.09) – illustrates quantization of electronic energy levels

c. **Electron e/m Apparatus** – Cenco WL0623B (1 @ $3,000) – demonstrates ratio of two fundamental electron properties

d. **Zeeman Effect Apparatus** – Cenco CP33866-00 (1 @ $6,990) – interaction of electron spin with external magnetic field

e. **Electron Diffraction** - Cenco WLS1802-72 Diffraction Tube, WLS1802-62 Tube Holder, WLS1802-07 Power Supply (1 set @ $1,188) – demonstration of wave nature of matter particles

f. **Basic Optics Light Sources** – Pasco OS-8470 (6 @ $119 each)

g. **Ray Table (w/D Lens)** – Pasco OS-8465 (6 @ $39 each)
3.) Technology Needs
   C. Physics
      a. Data Studio Departmental License – One time expense of $400 – needed to allow data collection in multiple introductory labs
      b. Laptop Computers – 12 @ $1,000 each – needed to provide 8 per lab with backup and flexibility for upper level courses
      c. Secure storage for laptop computers for room 2308
      d. Networked Printer for SC 2402 (1 needed @ $500) (Needed for printing to replace 6 antiquated printers with one networked printer-Carryover request)
      e. National Instruments USB-6009 data acquisition boards (10 needed @ $269 ea. = $2600) (Needed for PHYS 3120 PHYS 4120 to upgrade from RS-232 ported data acquisition systems and retire DOS-based systems)
Attachment #3

Minutes for Physics Curriculum Committee Meeting (1/27/12)
Met in SC2402 (Mechanics Lab) at 12:00pm-12:55pm
Present: Dr. Bill Baird, Dr. Jeffery Secrest, Ms. Donna Mullenax, Ms. Poorani Shanthakumar, & Mr. Leon Jaynes (Chair)

The following occurred:
1. Mr. Jaynes reported that the request to add the requirement of a “minimum grade of C” to the pre-requisite of MATH 2072 Calculus II to the Catalog description of PHYS 2212K was approved at the UCC meeting on 1/11/12 and Dr. Baird reported that this was accepted at the Faculty Senate meeting on 1/23/12.

2. A motion to change the credit awarded for an IB course in physics on p. 24 in the Undergraduate Catalog from PHYS 2211K to PHYS 1111K was approved as follows:
   IB course in physics with a grade of 5, 6, or 7: PHYS 2211K   PHYS 1111K   4s.h.

Rationale: The IB program does not address sufficient calculus based physics topics to warrant credit for calculus based physics. The appropriate credit should be for algebra/trigonometry based physics instead of for calculus based physics; i.e. credit for PHYS 1111K instead of for PHYS 2211K. (According to the description of the IB program posted at <http://www.ibo.org> Diploma Programe Physics-guide, calculus could be taken but is not required in the IB program. So, a student may have completed the program with physics without calculus based physics.)

3. A motion was approved to change the prerequisite for PHYS 3120 DIGITAL ELECTRONICS as follows:
   PHYS 3120 DIGITAL ELECTRONICS   1-6-3
   Prerequisite: MATH 1113 and 8 semester hours of lab science Either PHYS 1112K with a minimum grade of C and MATH 1161 with a minimum grade of C or PHYS 2212K with a minimum grade of C

Rationale: The students taking PHYS 3120 Digital Electronics need the electricity concepts and the lab experience of connecting basic circuits provided in either PHYS 1112K or PHYS 2212K in order to take this course. Students that successfully complete PHYS 1112K or PHYS 2212K will have earned 8 semester hours of lab science because of their prerequisites. The inclusion of MATH 1161 with PHYS 1112K attempts to insure that those students have some common mathematical skills with those that have taken PHYS 2212K.

4. A motion was approved to request the creation of lab fees of $40 per student for PHYS 3801K, PHYS 3120 with lab, PHYS 3700K, & PHYS 4120 with lab.
   Rationale: These upper division lab courses use many specialized/consumable materials.

5. Discussion was held on the upper division physics courses needed for Fall Semester, 2012 and it is recommended that PHYS 3801, PHYS 4120, & PHYS 4170 be offered.
6. Dr. Secrest gave an update on the creation of Physics Tracks.

7. Dr. Secrest gave an update on the production of a Physics Brochure.


Respectfully Submitted, M. Leon Jaynes, Chair
Safety Practices for Department of Chemistry and Physics Chemistry Laboratory and Research Assistants

Safety in the chemistry laboratory involves a cautious attitude and an awareness of potential hazards. Potential accidents can usually be anticipated and prevented. When safety precautions are followed, fewer accidents occur. The number of laboratory accidents can be reduced if every employee follows all the directions given for the procedure. Special note should be taken of specific instructions given in an MSDS.

General Regulations

1. Armstrong Atlantic State University is not responsible for damage to personal effects.
2. Whenever a chemistry lab/research assistant is working in a lab, a faculty or staff member of the department must be aware of this and present in the area.
3. Failure to comply with laboratory rules and regulations will result in disciplinary action from your supervisor and referral to the Department Head for further action.

Employee Responsibilities

1. Locate the safety equipment: eyewash, safety shower, fire extinguishers, first-aid kit and all exits that are to be used in an emergency. MSDS sheets for all chemicals are available in the lab.
2. Wear chemical safety goggles, defined as being splash resistant, indirectly vented and having a strap. Visitor glasses, sunglasses or any other type of non-laboratory eyewear may not be worn in the lab. Prescription eyeglass wearers must wear approved chemical safety goggles over their glasses.
3. Tie long hair back.
4. Wear shoes that cover your feet completely. Since broken glass and spilled chemicals are all too common occurrences in lab, your feet need more protection than that afforded by open-toed shoes or sandals.
5. Wear clothes that provide you with the maximum protection and coverage possible.
6. Wear a lab coat when handling hazardous materials.
7. Use gloves when handling hazardous materials or materials that can stain your skin; if they become contaminated, discard them, wash your hands and re-glove.
8. Wash your hands before leaving the lab.
9. Do not bring food and drink in the laboratory.
10. No unauthorized persons may accompany an employee in any lab.
11. Do not put any object, such as pens, pencils or fingers, into your mouth to prevent the entry of any chemical substance into your mouth. After lab setup is finished and before leaving the laboratory, you must wash your hands with soap and water.
12. Do not taste or smell chemicals. If you are directed to note an odor in an experimental procedure, use your hand to waft the odor to your nose.
13. Do not use any personal entertainment device in the laboratory.
14. Use the proper transport pail to carry corrosive, flammable or otherwise hazardous materials from one area to another.
15. Read the MSDS for any material before you handle it, to ensure safe handling.
16. When making acid solutions, always add acid to water.
17. Use the hood when preparing solutions which create hazardous vapors or when preparing containers of materials that are hazardous.
18. Make sure all containers are properly labeled (at a minimum, the full name of the compound, the name of the person who filled the container, the date the container was filled, and if the compound is flammable, corrosive, carcinogenic, mutagenic, teratogenic, explosive or poisonous.
19. Lab/Research assistants are not permitted to move compressed gas tanks without proper training and supervision.

Housekeeping Rules

1. Read the label on all stock solutions and chemicals carefully.
2. Take no more of a chemical than the procedure requires. Read the procedure carefully to determine the quantity of each stock solution and/or chemical you need. Obtain only that amount. Do not return the excess to the stock container; this will contaminate the stock solution. Instead dispose of the excess properly.
3. Do not insert a dropper or pipet into a stock solution container. Pour a small amount of the stock solution into a beaker and then insert your dropper or pipet into the beaker.
4. Clean up all solid and liquid spills immediately.
5. Do not pour any chemical into the sink or dispose of any chemical in the trash without prior authorization from your supervisor.
6. The rinsate created from cleaning empty containers that held hazardous compounds is considered hazardous and must be collected into the appropriate waste container.
7. Do not put paper or solid waste into the sinks.

Accident and Emergency Procedures

1. Report any accident, no matter how small, to your supervisor. If an injury occurs, the supervisor, employee involved and any witnesses will complete an incident report. Incident reports are kept in the first aid kit on the wall in the laboratory. The completed report will be given to the Safety Committee Chairperson and the Department Head.
2. Should an injury occur and a staff or faculty member is not immediately available, follow the “Procedures for Medical Emergency” posted over the phone in the laboratory room.

Medical or Hospitalization Insurance Information
You are not covered by medical or hospitalization insurance through Armstrong Atlantic State University. If you are involved in an accident, all medical expenses will be your responsibility.
Attachment #4-B

Safety Practices for Department of Chemistry and Physics Chemistry Laboratory & Research Assistants
Contract
Armstrong Atlantic State University

I have read carefully the *Safety Practices for Department of Chemistry and Physics Chemistry Laboratory & Research Assistants*. I understand the importance of these practices and recognize my responsibility to observe them for the safety and welfare of all the people in the laboratory. I understand that if I do not comply with these practices, I will be asked to leave the laboratory and referred to the Head of the Department of Chemistry and Physics for further action.

________________________________________
Print Full Name

________________________________________
Signature of Lab/Research Assistant

________________________________________
Date
Attachment #5

Lab Fee Data – January 2012

Comparative Labs Fees USG

Valdosta: $30 all lab courses
Georgia Southern: $40 – $50 on all lab courses
GCSU: $50 on all lab courses
Columbus State: $50 per credit (they have some 2 h labs, i.e. instrumental)
West GA: $79 on CHEM 1211, 1212, $35 everything else
NGCSU: $40 on all labs (including UG research)
Augusta State: $10 lab courses
Savannah State: $30 on all lab courses

Expenditure Breakdown by Course, etc.

<table>
<thead>
<tr>
<th></th>
<th>FY 2010-11</th>
<th>Fall 2011</th>
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<tbody>
<tr>
<td>classes that have lab fees (total)</td>
<td>$29,475.55</td>
<td>$10,706.00</td>
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<tr>
<td>chem</td>
<td>$20,475.40</td>
<td>$10,227.89</td>
</tr>
<tr>
<td>phys</td>
<td>$9,000.15</td>
<td>$478.11</td>
</tr>
</tbody>
</table>

| classes without lab fees (total) | $2,179.27 | $3,378.47 |
| chem                             | $1,532.48 | $2,409.77 |
| phys                             | $646.79  | $968.70   |

| research                         | $4,308.41 | $5,397.88 |
| instruments                      | $53,859.87 | $5,604.57 |
| lab supplies not assigned        | $7,024.21 | $6,166.07 |
| other                            | $8,509.25 | $711.43 |
|                                  | $105,356.56 | $31,964.42 |